Curriculum Vitae

- First name: **Majid**
- Second name**:** **Ali**
- Surname name: **Abusini**
- Place and Date of Birth: Zarka **(Jordan**) December 27Th **1962**
- Nationality: Jordanian / **N.N: 9621015156**
- Religion: **Muslim**
- Marital status: Married / **5** kids
- Gender**: Male**
- Position: **Full Professor / Theoretical Nuclear Physics**

The Theory of Quantum Scattering

Address: **Al- albayt University – Physics Departme**nt.
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Academic Achievement

2000: Ph.D. degree in theoretical physics (Nuclear physics) from Tbilisi State University (Georgia) Department of Nuclear Physics. Thesis Title "On the theory of nucleon-deuteron scattering".

1987: M.A. degree in experimental physics (Nuclear physics) from Tbilisi State University (Georgia) Department of Nuclear Physics. Thesis Title "Radiocarbon (C-14) measurements in Greenland ice using scintillation spectrometry**.**

1985: B.A. degree in general physics from Tbilisi State University (Georgia) Department of General Physics.

Skills: Skilled in Windows (Latex, Work Scientific Place, Fresco Prog.) communication skills typing Internet, (team work).

Languages:

Language	Written	Spoken
Arabic	Exc.	Exc.
English	Exc.	v.good

Scientific Contribution:

- A .Alfukah and **M .Abusini** , An Optical Model for Elastic Scattering of the Deuteron on the and Doubly Magic Nuclei**, Physics of atomic nuclei**, V. **84, 3(2021)256-264.**
- M. Alshudifat, M. Serhan and **M.Abusini**, Elastic scattering of nucleon by the lightest mirror nuclei ^{3}H and ^{3}He using the optical model potential, **Inter. Journal of Modern Physics E , V. 29, 09 , 2050078 (2020) .**
- Mohammed Serhan, **Majid Abusini**, Emad Almahmoud, The electronic properties of different chiralities of defected boron nitride nanotubes: Theoretical study, **Computational Condensed Matter** 22 (**2020**) e00439.
- **M. Abusini** , The first order optical potential evaluation for the elastic scattering of neutron on the bound system using the impulse approximation method, **Inter. Journal of Modern Physics E, V. 28, 10 1950091 (2019).**
- M. Serhan**, M. Abusini**, Ahmed Al-Jamel, H. El-Nasser and Eqab Rabei, Response to "Comment on 'Quantization of the damped harmonic oscillator, **J. Math. Phys**. 60, 094101 (**2019**).
- **M. Abusini** and A. Ahbika. Energy Sensitivity of The Low-Energy Parameters of Neutron-Proton Scattering for Various Nucleon-Nucleon Potentials, **Rev. Cabana Fis.** Vol 36, No. 1 (**2019**) 15.
- **M. Abusin**, M. Serhan, Mohamad F. Al-Jamal, Ahmed Al-Jamel and Eqab M. Rabei, Some exactly solvable *PT* -invariant potentials with real spectra via the (extended) Nikiforov –Uvarov method, ***Pramana – J. Phys***. (**2019**) 93:93 © Indian Academy of Sciences.
- M. Serhan, **M. Abusini**, Ahmed Al-Jamel, H. El-Nasser, and Eqab M. Rabei, Quantization of the damped harmonic oscillator, **J. Math. Phys**. 59, 082105 (**2018)**1-9.
- Jamal Talla, **Majid Abusini**.et al, Tuning electronic properties and band gap engineering of defective carbon nanotube bundles: First principles calculations, **Materials Express**. Vol. 7, 6(**2017**)1-6.

- **Majid Abusini** The effect of core-polarization on nucleon-nucleon realistic potential parameters in doubly-magic nucleus ^{40}Ca. **Adv. Studies Theor. Phys**. 8,10 (**2014**) 447 – 455.
- A.Al-jamel, M.Serhan, **M.Abusini**. Analytical expression for nucleon-nucleon phase shift at high energy using separable potential. **Journal of Theoretical and Applied Physics**. 5,2 (**2011**) 47-52.
- S.A. Hassan**, Majid Abusini** , A.A.AL-Sa'ad Inelastic Electron Scattering Form Factor of Isocalar (T=0) and Isovector (T=1) Particle –Hole States in ^{12}C and ^{16}O. **Ukr. J. Phys**. 56, 4 (**2011**).
- J. Al-Jundi, W.B.Li, **M. Abusini**, J.Tschiersch, C.Hoeschen, U.Oeh . Inhalation dose assessment of indoor radon progeny using biogenetic and dosimetric modeling and its application to Jordanian population. **Journal of Environmental Radioactivity**, 102 (**2011**) 574-580.
- N Chair**,** A Al Jamel, M Sarhan**, M Abu Sini,** and E. M.Rabie. The Noncommutative quadrupole field effect for the H-atom**, Journal of Physics A: Mathematical and Theoretical**, 44(2011) 095306 (6pp)
- **Abusini Majid,** Analyzing Power of $d(\vec{n},n)d$ Elastic Scattering at Low Energy, **Advanced Studies of Theoretical Physics**, Vol. 5, 2 (**2011**)77-90.
- N.Al-Bouzieh, **M.Abusini**, Application of Nijmegen Potentials for elastic neutron-deuteron low energy scattering, **Journal of Theoretical and Applied Physics**, Vol. 4, 2(**2010**) 39-43.
- **M.Abusini**, Single-collision approximation for p-^{3}He elastic scattering at low energy, **Physics of atomic nuclei**, 72 (**2009**) 946-949.
- M. Serhan, **M.Abusini,** Eqab M. Rabei, Quantization of Holonomic Systems Using WKB Approximation, **Int. J Theor Phys**.48 (**2009**) 2731-2739.
- **Abusini M.,** M. Alfarajat, and A. Masalhah. Invistigation of spatial variation of natural radioactivity in rocks outcrops in Al-mafraq area, Almanarah for research and studies, Vol. 13, (**2008**) 11-30.

- **M**.**Abusini**, K. Al-ayasreh and J. Aljundi**.** Determination of Uranium, Thorium and Potassium Concentrations in Soil Cores in Araba Valley**, Radiation Protection Dosimetry,** Vol. 128 (**2007**) 213-216.

- Mebonia J. **, Abusaini M**. Saralidze P.On One Approach to Three Body Problem, Nuc.Phys. V.63, 12 (**2000**) p. 2181–218.

- Mebonia J. **, Abusaini M**. Saralidze P. Investigation of direct nuclear processes involving the lightest nuclei. Proceeding of Tbilisi State University, V34, (**1999**)P. 45.

* Mebonia J. , **Abusaini M**. Saralidze P. Mechanism of nucleon – deuteron elastic scattering, Bull. Georgia Acad.Sc. V.160, 2, (**1999**) P. 251

- Mebonia J., **Abusaini M**. Saralidze P. Mechanism of nucleon – deuteron quasi-elastic scattering, Bull. Georgia Acad. Sc. V.160, 3, (**1999**) P. 457.

M.S. Thesis: Supervised Research

1-Yazan Khreis , The Abundance of Low Z elements ^{26}Al in AGB Stars, AL-ALbayt University , Department of physics – Jordan **(2020)**

2- Ahmad Alfoqaha , An Optical Model for the Elastic Scattering Of the Deuteron on the Doubly-Magic Nuclei AL-ALbayt University, Department of physics , Jordan **(2019).**

3-Hanaa Aakilan, Investigation of the Concentration of Heavy Metals and Radionuclides in Wheat Plants in Northern Jordan **(2018)**

4- Maaly Al-Athamneh, The Concentration of Radionuclides in Heavy Metals in some Vegetables Plants at Northern Jordan **(2018)**

5-. Ali Ahbika . Energy Sensitivity of Low- Energy Parameters of Neutron-Proton Scattering for Various Nucleon-Nucleon Potentials **(2017)**

6- S. Almarshidi, Theoretical study for electron scattering from closed shell nuclei in the framework of particle-hole configuration, AL- albayt University, Department of physics , Jordan (**2010)**.

7- N. Al-buazeih , Application of Nijemjin Potentials for nucleon deuteron scattering at low energy, AL- albayt University, Department of physics , Jordan (**2010).**

8- H. Al-aasi , On nucleon-nucleon potential using Born Approximation Al-albayt University, Department of physics , Jordan (**2009)**.

9- Ashraf Hamma ,Measurments of Uranium, Thorium and Potassium Concentrations in Surface Soil of Mafraq Area Using Gamma Spectroscopy (**2009)**.

10- M. Al-rabaa , Phase shift analysis of nucleon-nucleon scattering at low energy, AL- albayt University, Department of physics , Jordan (**2008)**.

11- A. Hammad , Determination of Thorium, Uranium, and potassium elemental concentration of surface soils in AL-Mafraq Area, AL- albayt University, Department of physics, Jordan (**2008)**.

12- **M. Alzubaier** Investigation of Radiation Content of Phosphogypsum in Jordanian Phosphate Mines AL- albayt University, Department of physics, Jordan (**2007)**.

13- **A. AL-Masalhah,** Investigation of the Sources, Values and Environmental Impacts of the Natural Radioactivity in AL-Mafraq Area-Jordan**,** AL- albayt University, Department of physics, Jordan (**2006).**

14- **K. AL-Aiasrah,** Determination of Thorium,Uranium,and potassium elemental concentration of surface soils in Araba Vally-Jordan**.,** AL-albayt University, Department of physics , Jordan (**2006)**.

15- **T. Haimour,** Experimental Investigation of the Radiation Contents of Some Building Materials in North Jordan**,** AL-albayt University, Department of physics, Jordan (**2005)**.

Conferences:

***** The sixth Jordanian workshop on Synchrotron Radiation Applications, the University of Jordan, Amman, April 25th, **2018.**

* The first symposium on research collaboration at Al-Ula Science college – Saudi Arabia – Apr.25-28, **2016**.

*Entrepreneurship For Scientists and Engineers in Jordan /22-30-10/**2008**.

* Third Jordanian workshop on Synchrotron Radiation Applications, the University of Jordan, Amman, April 25th, **2007**

* Fifth International Symposium on Use of Nuclear Technical in Environmental Studies, Yarmouk University, Sep. **2006**

* Sixth International Symposium on Use of Nuclear Technical in Environmental Studies Yarmouk University Sep. **2005.**

* Fourth International Symposium of Hazard Materials, Aqaba Sep. **2004**

Area of Interest:

The following fields are the ones I am interested in, and the ones where in I am proficient and capable of undertaking researches, studies, and other academic works (such as supervision of academic theses):

a)Teaching Courses

1.Nuclear Physics (BA+MA). **2.** Modern Physics. **3**. Radiation physics.

4. Physics of Energy. **5**. Mathematical Physics 6. Quantum Mechanics (BA+MA).

7.. Environmental Physics. **8**. Special Relativity. **9**.Thermodynamics.

10. Seminar and Research Project. **11**. General Physics. **12**. Physics in our life.

b) Research Area:

a) Three-Body Problem Theory (nucleon-deuteron scattering)

n(d,n)d elastic scattering. , n(d,2n)p inelastic scattering.

b) Collision Theory. (The lightest nuclei), nucleon-nucleon potentials, theoretical study of inelastic scattering of electron from nuclei (Longitudinal and Transverse magnetic form factors)

c) Quantum Mechanics – Quantization of Holonomic Systems

d) Natural radioactivity measurement and estimation of doses.

e) Material Physics (Nanotechnology): Theoretical study

Experiences:

* **Sep. 2020 Till now Full Prof.** (Nuclear Physics – Theory)at AL-albayt University/ physics department, teaching the Nuclear physics, Quantum Mechanics (BA+MA), Radiation Physics and Energy Physics.

* **Sep.2016 Till Aug. 2020 Associate Prof** at AL-ALbayt University-physics Department

* **Feb. 2012 Till Feb.2016. Associate prof.** at Taibah University-physics Department**.**

* **Feb.2014 Till Sep. 2015** Head of physics department/Science faculty/ Taibah University- Saudi Arabia

* **Feb.2015 Till Sep. 2016** Head of Research and graduate studies Center / Taibah University- Saudi Arabia

* **Oct. 2011. Associate prof.** at AL-ALbayt University-physics Department**.**

* **Sep. 2007 Till Sep. 2008** , Head of physics department/Science faculty/ AL-ALbayt University

* **Sep. 2003 Till Oct.2011 Assistant prof.** at AL-ALbayt university-physics department, teaching nuclear physics, Radiation Physics, Energy Physics.

* **Oct. 2002 Till Sep 2003**: Head of Basic Sciences Department, Balqa Applied University. Ashoubak College.

* **Oct. 2001 Till Sep 2002**: **Associate prof.** at Balqa Applied University. Ashoubak College.

* **Nov. 2000 till 0ct 2001**. Worked in General Directorate of Curricula (Ministry of Education in Jordan) As a member of Scientific Textbooks Department (Physics 11^{Th} & 12^{Th} Grades).

* **Feb.2000-June 2000**: A lecturer at Tbilisi State University (Department of Nuclear Physics) subject taught: nuclear reactions and elementary particles .

* **Sep.1999-Dec 1999**: A lecturer at Tbilisi State University (Department of Atomic Physics) subject taught: atomic models and classical scattering theory.

* **Sep.1998-Dec 1998**: A lecturer at Tbilisi State University (Department of General Physics) subject taught: quantum mechanics (nonrelativistic physics)

* **Feb.1998-June 1998:** A lecturer at Tbilisi State University (Department of General Physics) subject taught: physics 102.

* **Feb.1997-June 1997**: A lecturer at Tbilisi State University (Department of General Physics) subject taught: physics 101.

* **During this period** I undertook my Ph.D degree thesis and collaborated with the Institute of High Energy (Georgia/ Tbilisi) and I was a member in the department of General Physics in T.S.U.

* **Feb.1992-June 1996**: A teacher of physics at Aqaba Secondary School (Jordan) 11 and 12 grades.

* **Dec.1990- Feb1992**: A teacher of physics at Chicago Islamic Centre Al-Raya Secondary School (USA) 10 and 11 grades.

* **Sep.1987-June 1990**: A teacher of physics at Aqaba Secondary School - Aqaba (Jordan) 11 and 12 grades.

References:

Full references will be furnished upon request

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